

CLAIMS

What is claimed is:

1. A scanning device, comprising:

a movable stage on which a specimen is positioned;

5 irradiation means which irradiates an electron beam onto an irradiation region of said specimen;

secondary beam detection means used in generating a picture of said irradiation region by detecting a secondary beam which consists of at least one of secondary electrons or reflected
10 electrons from the irradiation region of the said electron beam;

an imaging electron optical system which causes imaging of said secondary beam on a detection surface of said secondary beam detection means, and which is arranged between said specimen and said secondary beam detection means;

15 said secondary beam detection means is equipped with a fluorescent unit which is arranged on said detection surface, and which converts said secondary beam into light, and one-dimensional line sensors which have a structure arrayed in two dimensions forming electric charge by photoelectric conversion, an array imaging element which continuously adds up the electric
20 charge of the accumulated image in a predetermined line of said line sensors, and the electric charge of the line of said image which moves accompanying the movement of said stage, and a two-dimensional imaging element which generates electric charge
25 by means of photoelectric conversion; and

changeover means for selectively irradiating the light converted by means of said fluorescent unit to an imaging element which is either one of said array imaging elements and said two-dimensional imaging element.